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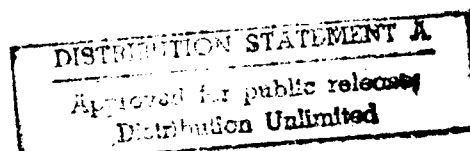
PATIENT SATISFACTION SURVEY
1989-1990

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Health Services Command
Fort Sam Houston, Texas 78234-6060

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19. ABSTRACT (Continue on reverse if necessary and identify by block number) Patient Satisfaction Surveys were developed from the Group Health Association of America (GHAA) Consumer Satisfaction Survey. Patient Satisfaction Surveys were mailed to 9,000 eligible beneficiaries at 37 Army medical treatment facilities (MTFs). Subjects were randomly selected from Defense Eligibility Enrollment Reporting System (DEERS) data lists using zipcodes in the MTF catchment areas. Responses were received from 2,874 with an additional 550 surveys returned as undeliverable. The usable return rate was 32%. Eligible beneficiaries reported moderate satisfaction with the health care received in military medical treatment facilities. The retired personnel reported the most satisfaction, while the active duty dependents were least satisfied. Individuals who have used the military health care system are generally satisfied with the doctors and staff, particularly the friendliness, courtesy, and support given. Specific problems included the appointment systems, access to services, telephone information or advice, waiting times, and difficulties with particular clinics or personnel. The majority of the respondents are using outpatient services. Recommendations are offered.			
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PATIENT SATISFACTION SURVEY

Background

The patient satisfaction survey tasking came from Headquarters, Health Services Command requesting the GHAA Consumer Satisfaction Survey instrument be used to survey potential users of DoD medical treatment facilities (HSC Task Number 2293).

The Patient Satisfaction Survey project was begun in June 1989 with the request to the Group Health Association of America (GHAA) for permission to modify the GHAA Consumer Satisfaction Survey items for use with a military population. With GHAA's permission, the survey items were staffed with the U.S. Army Soldier Support Center National Capitol Region in accordance with AR 600-46. A survey control number was assigned by Soldier Support Center NCR (ATNC-AO-89-26, RCS:MILPC-3).

METHOD

Subjects

Patient Satisfaction Surveys were mailed to 9,000 eligible beneficiaries at 37 Army medical treatment facilities (MTFs). For each of the medical centers, 400 individuals were selected; for the other medical activities, 200 individuals were chosen. Subjects were randomly selected from Defense Eligibility Enrollment Reporting System (DEERS) data lists using zipcodes in the MTF catchment areas.

Procedure

Control numbers were used to identify the MTF and the category of beneficiary (active duty, active duty dependent, retired, or retired/deceased dependent); this became the "anticipated" category of beneficiary. Subjects reported their own category of beneficiary; this became the "self reported" category of beneficiary. The lists of eligible beneficiaries were determined from the DEERS patient populations at the selected Army MTFs. Mailing labels were developed from the DEERS lists broken down by zipcode areas around the Army MTFs. Problems with the format of the DEERS lists and missing or incomplete addresses delayed the development of mailing lists. Further delays in mailing out the surveys occurred when flooding ruined the majority of the study materials.

Survey instruments were sent out from December 1989 through March 1990. As surveys were returned, the contents were edited and comments coded. Items were scored as suggested by GHAA. Content categories were developed using the GHAA criteria. The ten GHAA content categories were access, choice-continuity, communication, finances, interpersonal care, technical quality, outcomes, overall quality, time spent, and general satisfaction. The survey instrument is contained in Appendix A and average responses in Table 1.

Overview

Descriptive statistics were computed for respondents' demographics as to category of beneficiary, branch of service, gender, and rank. Psychometrics on the GHAA content categories for the rated items were examined using factor analyses and reliability estimates. Comparative analyses were conducted by category of beneficiary (Active Duty, Active Duty Dependent, Retired, Retired/Deceased Dependent), type of nearest DoD facility (MEDCEN, MEDDAC), type of health care program used (DoD MTF Only, CHAMPUS Plus, Private/Other), and use patterns. Comments written by respondents were analyzed for content.

RESULTS

DEMOGRAPHICS

As of 25 May 1990, responses had been received from 2,874 individuals, with an additional 550 surveys returned as undeliverable. The usable return rate was 32%.

Category of Beneficiary Users

The distribution of eligible beneficiary categories of the 9,000 sent out was Active Duty (27.4%), Active Duty Dependents (34.1%), Retired (16.8%), and Retired/Deceased Dependents (21.5%). Of the 2,874 respondents analyzed, the proportions for the "anticipated" beneficiary categories were Active Duty (25.4%), Active Duty Dependents (26.5%), Retired (21.6%), Retired/Deceased Dependents (26.3%), and unidentified (0.1%). The proportions as "self reported" by the respondents were Active Duty (28.6%), Active Duty Dependents (23.2%), Retired (24.4%), Retired/Deceased Dependents (23.9%), and unidentified (<0.1%). There was not a significant difference between the distributions ($r=.960$). The "self reported" category of beneficiary was used for all analyses.

Branch of Service

The distribution of respondents and category of beneficiary by branch of service follows.

	<u>Category of Beneficiary of Population Sent Out</u>			
	<u>Act Duty</u>	<u>ActDuDep</u>	<u>Retired</u>	<u>Ret/Dec dep</u>
Branch of Service				
Army	1915	2294	842	1080
Air Force	300	369	428	571
Navy/Marines	293	371	253	284

	<u>Category of Beneficiary of Respondents</u>				
	<u>Act Duty</u>	<u>ActDuDep</u>	<u>Retired</u>	<u>Ret/Dec dep</u>	<u>Else</u>
Branch of Service					
Army	631	508	390	420	0
Air Force	116	91	191	185	0
Navy/Marines	74	66	117	81	0
Unidentified	0	1	2	0	1

	<u>Category of Beneficiary of Undeliverable/Returns</u>			
	<u>Act Duty</u>	<u>ActDuDep</u>	<u>Retired</u>	<u>Ret/Dec dep</u>
Branch of Service				
Army	117	175	33	42
Air Force	18	32	28	11
Navy/Marines	29	37	15	13
Unidentified	0	0	0	0

Gender

The distribution of respondents, category of beneficiary, and gender by branch of service follows.

Branch of Service	Category of Beneficiary of Respondents								
	<u>Act Duty</u>		<u>ActDuDep</u>		<u>Retired</u>		<u>Ret/Dec dep</u>		<u>Else</u>
	Male	Female	Male	Female	Male	Female	Male	Female	
Army	468	163	21	487	367	23	9	411	0
Air Force	95	21	3	88	186	5	3	182	0
Navy/Marines	49	25	2	64	112	5	3	78	0
Unidentified	0	0	0	1	1	1	0	0	1

Rank

The distribution of respondents, category of beneficiary, and rank by branch of service follows.

Branch of Service	Category of Beneficiary of Respondents											
	<u>Act Duty</u>						<u>ActDuDep</u>					
	E1-5	E6-9	WO	01-3	04-6	Gen	E1-5	E6-9	WO	01-3	04-6	Gen
Army	266	171	23	109	62	0	132	192	18	95	70	1
Air Force	50	36	0	16	14	0	24	29	0	18	20	0
Navy/Marines	25	28	1	8	10	2	16	26	0	3	21	0
Unidentified	0	0	0	0	0	0	0	0	0	0	1	0

Branch of Service	Category of Beneficiary of Respondents														
	<u>Retired</u>							<u>Retired/Deceased</u>							<u>Dep</u>
	Else	E1-5	E6-9	WO	01-3	04-6	Gen	Else	E1-5	E6-9	WO	01-3	04-6	Gen	
Army	1	17	211	32	17	197	5	8	12	241	35	12	104	8	
Air Force	0	4	108	0	5	70	4	7	13	98	4	10	51	2	
Navy/Marines	2	7	56	1	5	42	4	7	6	43	2	3	20	0	
Unident	2	0	0	0	0	0	0	2	0	0	0	0	0	0	

PSYCHOMETRICS

The GHAA survey instrument consists of 36 rated items using a 5-point Likert scale. For the present study, one additional scale point was added to the GHAA 5-point scale, that of "Have Not Used." One additional item (Q10) was added to bring the number of rated items to 37.

A series of analyses were conducted to determine the psychometric properties of the items. The details are contained in Appendix A. The analyses included a principal components factor analysis of the 37 rated items; the amount of variance accounted for was 68.3%. The GHAA content categories were subjected to reliability estimates using the Kuder Richardson procedure to calculate coefficient alphas. Reliability estimates were calculated for the item clusters extracted from the factor analysis. Inter-item Pearson product moment correlation coefficients were calculated between selected items. In general, the GHAA content area items had quite acceptable psychometric properties, with coefficient alphas ranging from .885 to .944.

COMPARATIVE ANALYSES

Scoring of Content Categories

GHAA recommended transformation of the data by adding all of the items in a content category, subtracting the lowest possible score, and dividing the result by the range of scores possible. This assumes all subjects use all services and answer all questions; the GHAA scoring system was not practical as not all respondents used all the services or answered all of the items. The scoring method chosen for each content category was to calculate a mean of all of the items responded to by the subject. Mean content category responses for each respondent were the dependent measures. Table 1 summarizes item responses within content categories.

Overview

Analysis of variance (ANOVA) comparisons were made on the ten GHAA content categories; comparisons were made for Category of Beneficiary, Type of Nearest DoD Facility, Type of Health Care Program Used, and use patterns. Means of the content category responses for each respondent were the dependent measures. One-way ANOVA comparisons are summarized in Table 2, while four-way ANOVA findings for main effects and interactions are shown in Table 3. The findings follow.

Category of Beneficiary Users

The proportions as "self reported" by the respondents were Active Duty (28.6%), Active Duty Dependents (23.2%), Retired (24.4%), Retired/Deceased Dependents (23.9%), and unidentified (<0.1%). Table 2 contains a summary of the means and one-way analysis of variance comparisons. There were significant differences between the categories of beneficiaries for each of the content categories. In general, the Retired were significantly more satisfied, while the Active Duty Dependents were least satisfied.

Type of Nearest DoD Facility

Comparisons were made between eligible beneficiaries in the zipcode areas of Army Medical Centers (MEDCENS) and Army Medical Activities (MEDDACs). Of the surveys analyzed, 35.7% were returned from MEDCENS, the remainder from MEDDACs, with .1% unidentified. Table 2 contains a summary of the means and one-way analysis of variance comparisons. There were significant differences between eligible beneficiaries near MEDCENS versus those near MEDDACs; those near MEDCENS reported being significantly more satisfied.

Type of Health Care Program Used

Comparisons were made between the types of health care program used in response to Q38. Responses were collapsed as follows: DoD Medical Treatment Facility only (51.3%), CHAMPUS or some combination with CHAMPUS (32.7%), private health insurance (16.0%). Table 2 contains a summary of the means and one-way analysis of variance comparisons. There were significant differences between the types of health care program used; the users of the DoD Medical Treatment Facility were generally most satisfied, while the CHAMPUS users were significantly less satisfied.

Who Uses the DoD Health System?

In response to Q42, 88.8% asserted to have used the DoD Health System. The distribution of individuals who had used the DoD Health System broken down by category of beneficiary was Active Duty (89.3%), Active Duty Dependents (93.9%), Retired (85.6%), and Retired/Deceased Dependents (86.4%).

In response to Q44, 80.8% of respondents reported using the MTF in the last 12 months. The distribution of recent users by category of beneficiary was Active Duty (84.9%), Active Duty Dependents (90.0%), Retired (73.8%), and Retired/Deceased Dependents (73.7%).

In response to Q45, 16.9% stated overnight admission for medical care during the last 12 months (n=472). The distribution of inpatient admissions by category of beneficiary was Active Duty (17.0%), Active Duty Dependents (21.4%), Retired (16.1%), and Retired/Deceased Dependents (13.1%).

Response to Q47 showed that 82.0% made outpatient visits for medical care during the last 12 months (n=2285). The distribution of outpatient visits by category of beneficiary was Active Duty (82.8%), Active Duty Dependents (91.5%), Retired (75.7%), and Retired/Deceased Dependents (77.9%).

Level of Satisfaction: Ratings

The overall level of satisfaction reported was good (mid-point on a 5-point scale). Table 1 summarizes findings. The most satisfaction was expressed with the areas dealing with interpersonal care, the technical quality, and access to care facilities. The specific issues with the highest satisfaction ratings were "Convenience of the location of the office;" "Friendliness and courtesy shown to you by doctors;" "Respect shown to you, attention to your privacy;" "Completeness and quality of medical offices & facilities;" and "Skill, experience, and training of doctors."

The lowest satisfaction ratings were with phone access to care and with choice of personal doctor. The specific issues with the lowest ratings were "Length of time it takes to make appointment by phone," "Arrangements for choosing a personal doctor," "Ease of seeing the doctor of your choice," "Availability of medical information or advice by phone," and "Length of time you wait between making an appointment for routine care and the day of your visit."

COMMENTS

Level of Satisfaction: Comments

The comments added by the respondents supported a moderate level of satisfaction with the medical care received. The most positive comments dealt with specific MTFs. There were emphatic negative comments offered about several areas. Specific negative comments dealt with the appointment system, a particular clinic or service, and the waiting time at the office to see the doctor. Table 4 summarizes the content of the comments offered in the major categories.

DISCUSSION

Areas Needing Change

Among the areas rated needing attention were those dealing with the appointment system, waiting times, the choice of a particular provider, and phone access to care. The specific issues with the lowest satisfaction ratings were with the "Length of time it takes to make appointment by phone," "Arrangements for choosing a personal doctor," "Length of time you wait between making an appointment for routine care and the day of your visit," "Arrangements for making appointments for medical care by phone," "Ease of seeing the doctor of your choice," and "Availability of medical information or advice by phone." The comments added by the respondents were specifically negative about the appointment systems, particular clinics or programs, and the waiting times.

What Do These Findings Mean?

The majority of the respondents are using outpatient services at DoD MTFs. Individuals who have used the DoD Health System are generally satisfied with the care provided by the doctors and staff, particularly the interpersonal dynamics (the friendliness, courtesy, respect, reassurance, and support given to the patients). Once the patient got into the system, the MTF staff was perceived as providing good health care. The problem was obtaining access to the system or telephone information about specific problems. The retired patients were most satisfied with the care provided, while the Active duty dependents were least. The retired patients were most likely to add comments about their experiences.

Comparisons With Previous Studies

Literature searches of the Medline and the Defense Technical Information Center data bases revealed a number of citations on patient satisfaction. Patient expectations and satisfaction have been examined in numerous studies (Brooks, 1973; Davies and Ware, 1988; Fisher, 1971; Lebow, 1974, 1975, 1983; Houston and Pasanen, 1972; Hulka, Zyzanski, Cassel, and Thompson, 1970; Mangelsdorff, 1979, 1980; Ware, 1976; Ware, Davies-Avery, and Stewart, 1978; Ware and Hays, 1988; Ware and Snyder, 1975; Ware, Wright, Snyder, and Chu, 1975; Zyzanski, Hulka, and Cassel, 1974). Within the DoD health care system, major studies have included the DoD Report of the Military Health Care Study (December, 1975), the DoD 1984 Health Care Survey (April, 1985), the General Accounting Office (GAO) surveys of military hospital patients views (September, 1989), and the RAND Corporation Health Care Reform Evaluation Study (ongoing).

The GAO study (1989) findings are most similar to the present study. The GAO results showed overall satisfaction with the care received in the military treatment facilities surveyed (three were Army facilities). The active duty personnel and dependents were somewhat less satisfied with the care than were retirees and their dependents. Patients generally considered the MTF staff to be courteous and competent. Outpatient appointments often were difficult to make. Comments on outpatient care dealt with rude or impersonal staff, more staff needed, and staff perceived as incompetent. Comments on inpatient care included rude or impersonal staff, compliments to hospital or staff, and staff perceived as incompetent.

CONCLUSIONS

Eligible beneficiaries reported moderate satisfaction with the health care received in military medical treatment facilities. The retired personnel reported the most satisfaction, while the active duty dependents were least satisfied. Individuals who have used the military health care system are generally satisfied with the doctors and staff, particularly the friendliness, courtesy, and support given. Specific problems included the appointment systems, access to services, telephone information or advice, waiting times, and difficulties with particular clinics or personnel. The majority of the respondents are using outpatient services.

RECOMMENDATIONS

Periodic surveys need to be conducted to assess changes in the health care delivery system. Feedback of findings for publication in post newspapers would be helpful to praise medical treatment personnel for the good work being done, while offering suggestions for further improvement. It might also reassure the eligible beneficiaries that their comments were being heard.

TABLE 1

DESCRIPTIVE STATISTICS: MEAN AND MEDIAN RESPONSES
FOR ITEMS IN CONTENT CATEGORIES

CONTENT	MEAN	MEDIAN	n
<u>ACCESS TO CARE</u>			
4. Convenience of the location of the office	3.61	4 (Very good)	2612
5. Hours when office visits can be scheduled	2.99	3 (Good)	2551
6. Access to specialty care if you need it	2.70	3 (Good)	2278
7. Access to hospital care if you need it	3.32	3 (Good)	2253
8. Access to medical care in an emergency	3.32	3 (Good)	2171
9. Arrangements for making appointments for medical care by phone	2.36	2 (Fair)	2487
10.* Length of time it takes to make appointment by phone	2.08	2 (Fair)	2464
11. Length of time you wait between making an appointment for routine care and the day of your visit	2.30	2 (Fair)	2485
12. Length of time spent waiting at the office to see the doctor	2.50	2 (Fair)	2534
13. Availability of medical information or advice by phone	2.26	2 (Fair)	1866
14. Access to medical care whenever you need it	2.84	3 (Good)	2492
15. Services available for getting prescriptions filled	3.23	3 (Good)	2530
<u>CHOICE AND CONTINUITY</u>			
25. Arrangements for choosing a personal doctor	2.16	2 (Fair)	1889
26. Ease of seeing the doctor of your choice	2.22	2 (Fair)	1984
<u>COMMUNICATION</u>			
22. Explanations of medical procedures and tests	3.18	3 (Good)	2516
23. Attention given to what you have to say	3.10	3 (Good)	2528
24. Advice you get about ways to avoid illness & stay healthy	3.11	3 (Good)	2385
<u>FINANCES</u>			
16. Protection you have against financial hardship due to medical expenses	3.19	3 (Good)	1945
17. Arrangements for you to get the medical care you need without financial problems	3.24	3 (Good)	1920

TABLE 1 CONTINUED

CONTENT	MEAN	MEDIAN	n
<u>INTERPERSONAL CARE</u>			
27. Friendliness and courtesy shown to you by doctors	3.55	4 (Very good)	2545
28. Personal interest in you and your medical problems	3.26	3 (Good)	2534
29. Respect shown to you, attention to your privacy	3.49	4 (Very good)	2534
30. Reassurance and support offered to you by doctors and staff	3.32	3 (Good)	2481
31. Friendliness and courtesy shown to you by staff	3.31	3 (Good)	2549
<u>TECHNICAL QUALITY</u>			
18. Completeness and quality of medical offices & facilities	3.35	3 (Good)	2533
19. Thoroughness of examinations and accuracy of diagnoses	3.14	3 (Good)	2524
20. Skill, experience, and training of doctors	3.32	3 (Good)	2511
21. Thoroughness of treatment	3.23	3 (Good)	2522
<u>OUTCOMES</u>			
33. The helpfulness of your medical care (how much you are helped)	3.28	3 (Good)	2523
<u>OVERALL QUALITY</u>			
34. Overall quality of care and services	3.27	3 (Good)	2545
<u>TIME SPENT</u>			
32. Amount of time you have with doctors & staff during a visit	3.08	3 (Good)	2527

TABLE 1 CONTINUED

CONTENT	MEAN	MEDIAN	n
<u>GENERAL SATISFACTION</u>			
1. I am very satisfied with the medical care I receive.	2.57	2 (Agree)	2687
2. There are some things about the medical care I receive that could be better.	2.01	2 (Agree)	2691
3. All things considered, the medical care I receive is excellent.	2.66	2 (Agree)	2684
35. There are things about the medical system I receive my care from that need to be improved.	2.05	2 (Agree)	2681
36. The medical care I have been receiving is just about perfect.	3.27	3 (Not sure)	2682
37. I am dissatisfied with some things about the medical care I receive.	2.49	2 (Agree)	2674

Note: * added to GHAA survey; not included in calculation of GHAA content category means

TABLE 2

MEANS AND ONE-WAY ANOVA COMPARISONS (n=2874)
FOR GHAA CONTENT CATEGORIES

CATEGORY OF BENEFICIARY CONTENT	1 <u>ActDut</u> (n=985)	2 <u>AD Dep</u> (n=910)	3 <u>Retrd</u> (n=776)	4 <u>Rtd Dep</u> (n=752)	<u>Cmprsn (sign)</u>
1 ACCESS	2.9	2.6	3.1	2.8	3>1=4>2
2 CHOICE CONTINUITY	2.0	1.9	2.5	2.3	3=4>1=2
3 COMMUNICATION	3.1	2.8	3.4	3.1	3>4=1>2
4 FINANCES	3.4	3.0	3.3	3.0	1=3>2=4
5 INTERPERSONAL CARE	3.2	3.0	3.7	3.5	3>4>1>2
6 TECHNICAL QUALITY	3.1	2.9	3.7	3.3	3>4>1=2
7 OUTCOMES	3.1	2.9	3.7	3.3	3>4>1>2
8 OVERALL QUALITY	3.1	2.9	3.7	3.3	3>4>1>2
9 TIME SPENT	3.0	2.7	3.4	3.2	3=4>1>2
10 GENERAL SATISFACTION	2.5	2.4	2.9	2.8	3=4>1>2

TYPE OF NEAREST DoD FACILITY CONTENT	1 <u>MEDCEN</u> (n=1223)	2 <u>MEDDAC</u> (n=2197)	<u>Cmprsn</u>
1 ACCESS	2.9	2.8	1>2
2 CHOICE CONTINUITY	2.2	2.2	ns
3 COMMUNICATION	3.2	3.0	1>2
4 FINANCES	3.4	3.1	1>2
5 INTERPERSONAL CARE	3.5	3.3	1>2
6 TECHNICAL QUALITY	3.4	3.1	1>2
7 OUTCOMES	3.4	3.1	1>2
8 OVERALL QUALITY	3.4	3.1	1>2
9 TIME SPENT	3.1	3.0	1>2
10 GENERAL SATISFACTION	2.7	2.6	1>2

HEALTH CARE PROGRAM USED MOST CONTENT	1 <u>MTF Only</u> (n=1420)	2 <u>CHMP plus</u> (n=905)	3 <u>Prv Oth</u> (n=442)	<u>Cmprsn</u>
1 ACCESS	2.9	2.7	2.9	1=3>2
2 CHOICE CONTINUITY	2.2	2.1	2.1	1>2
3 COMMUNICATION	3.2	3.0	3.0	1>2
4 FINANCES	3.3	2.9	3.3	1=3>2
5 INTERPERSONAL CARE	3.4	3.2	3.4	1=3>2
6 TECHNICAL QUALITY	3.3	3.0	3.3	1=3>2
7 OUTCOMES	3.3	3.1	3.3	1=3>2
8 OVERALL QUALITY	3.3	3.0	3.3	1=3>2
9 TIME SPENT	3.1	2.9	3.2	3=1>2
10 GENERAL SATISFACTION	2.7	2.5	2.7	1=3>2

TABLE 2 CONTINUED

USED DoD FACILITY IN LAST 12 MONTHS

<u>CONTENT</u>	<u>YES</u> <u>(n=2237)</u>	<u>NO</u> <u>(n=530)</u>	<u>Cmprsn</u>
1 ACCESS	2.9	2.7	1>2
2 CHOICE CONTINUITY	2.2	2.1	ns
3 COMMUNICATION	3.1	3.1	ns
4 FINANCES	3.2	3.1	ns
5 INTERPERSONAL CARE	3.4	3.2	ns
6 TECHNICAL QUALITY	3.2	3.2	ns
7 OUTCOMES	3.3	3.1	1>2
8 OVERALL QUALITY	3.2	3.1	ns
9 TIME SPENT	3.1	2.9	ns
10 GENERAL SATISFACTION	2.6	2.7	ns

TABLE 3
FOUR-WAY ANOVA COMPARISONS ON
GHAA CONTENT CATEGORIES
(Significance Levels)

<u>CONTENT</u>	<u>Main Effects</u>				<u>Interactions</u>			<u>Mult</u>	<u>r</u>	<u>n</u>
	<u>CatBen</u>	<u>MTF</u>	<u>HltPrg</u>	<u>Used</u>	<u>2x</u>	<u>3x</u>	<u>4x</u>			
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>						
1 ACCESS	0001	ns	0001	004	yes	ns	ns	.228	2596	
2 CHOICE CONTINUITY	0001	ns	0001	ns	ns	ns	ns	.189	1952	
3 COMMUNICATION	0001	ns	0001	ns	ns	yes	ns	.230	2444	
4 FINANCES	0001	0001	0001	ns	ns	ns	ns	.205	1976	
5 INTERPERSONAL CARE	0001	037	0001	044	ns	yes	ns	.273	2469	
6 TECHNICAL QUALITY	0001	011	0001	ns	yes	yes	ns	.291	2470	
7 OUTCOMES	0001	005	0001	001	yes	yes	ns	.272	2423	
8 OVERALL QUALITY	0001	005	0001	ns	yes	ns	ns	.279	2443	
9 TIME SPENT	0001	ns	002	024	ns	ns	ns	.227	2427	
10 GENERAL SATISFACTION	0001	ns	0001	ns	ns	ns	ns	.254	2648	

TABLE 4

PATIENT SATISFACTION COMMENTS

<u>CONTENT</u>	<u>Q#</u>	<u>AD</u>	<u>ADD</u>	<u>Ret</u>	<u>RtD</u>	<u>Totals</u>
01 Genrl Satisfaction	1,3,36	29	31	63	44	167
28 Pos Frndl & Crt Staff	31	3	4	1	11	19
31 Pos Overall Qual Care	34	9	10	7	8	34
32 Pos CHAMPUS Overall	38	2	9	6	3	20
35 Pos Private Hlth Ins	38	0	4	28	27	59
36 Pos Specific DoD MTF		11	13	30	18	72
37 Pos Spec Clin/Sv/Dpt		12	25	16	13	66
40 Pos Physicians		4	12	6	9	31
53 Genrl Dissatisfaction	2,35,37	68	49	38	49	204
54 Neg Convnc Location Office	4	14	5	22	21	62
56 Neg Accs to Spec Care	6	16	15	36	26	93
58 Neg Accs in Emergency	8	7	6	5	3	21
59 Neg Appointment System	9	28	57	52	52	189
60 Neg Time to Make Appnt	10	4	9	8	10	31
61 Neg Waiting Time Between	11	11	11	12	6	40
62 Neg Waiting Time Office	12	25	27	8	12	72
64 Neg Accs to Med Care	14	4	9	10	8	31
65 Neg Aval Prescrptn	15	13	13	14	20	60
68 Neg Thoroughness Tx	21	10	9	3	10	32
74 Neg Frndl & Crt Doctor	27	10	7	1	3	21
75 Neg Prsnl Intest	28	9	10	5	4	28
78 Neg Frndl & Crt Staff	31	13	22	7	6	48
80 Neg Helpfulness Care	33	9	4	6	4	23
81 Neg Overall Qual Care	34	23	24	11	11	69
82 Neg CHAMPUS Overall	38	3	12	10	9	34
83 Neg CHAMPUS Reimbrsmt	38	8	11	4	2	25
86 Neg Specific DoD MTF		11	15	16	9	51
87 Neg Spec Clin/Sv/Dpt		54	61	38	31	184
90 Neg Physicians		16	29	12	12	69
82 Comments about survey		11	8	3	5	27
99 Other		46	32	53	42	173

Note: AD (active duty), ADD (active duty dependent), Ret (retired),
RtD (retired/deceased dependent)

REFERENCES

- Brooks, C. H. (1973). Associations among distance, patient satisfaction and utilization of two types of inner-city clinics. Medical Care, 11, 373-81.
- Davies, A. R., & Ware, J. E., Jr. (1988). Involving consumers in quality of care assessment. Health Affairs, 7, 33-48.
- Fisher, A. W. (1971). Patients' evaluation of outpatient medical care. Journal of Medical Education, 46, 238-44.
- Lebow, J. L. (1974). Consumer assessments of the quality of medical care. Medical Care, 12, 328-37.
- Lebow, J. L. (1975). Evaluation of an outpatient pediatric practice through the use of consumer questionnaires. Medical Care, 13, 250-55.
- Lebow, J. L. (1983). Similarities and differences between mental health and health care evaluation studies assessing consumer satisfaction. Evaluation and Program Planning, 6, 237-46.
- Houston, C. S., & Pasanen, W. E. (1972). Patients perception of hospital care. Hospital, 46, 70-74.
- Hulka, B. S., Zyzanski, S. J., Cassel, J. C. & Thompson, S. J. (1970). Scale for the measurement of attitudes toward physicians and primary health care. Medical Care, 8, 429-36.
- Mangelsdorff, A. D. (1979). Patient satisfaction questionnaire. Medical Care, 17, 86-90.
- Mangelsdorff, A. D. (1980). Patients satisfaction with an Army family practice settings. Journal of Community Psychology, 8, 272-5.
- Ware, J. E., Jr. (1978). Effects of acquiescent response set on patient satisfaction ratings. Medical Care, 16, 327-36.
- Ware, J. E., Jr., Davies-Avery, A., Stewart, A.L. (1978). The measurement and meaning of patient satisfaction. Health and Medical Care Services Review, 1, 1-15.
- Ware, J. E., Jr., & Hays, R. E. (1988). Methods for measuring patient satisfaction with specific medical encounters. Medical Care, 26, 393-402.
- Ware, J. E., Jr., & Snyder, M. K. (1975). Dimensions of patient attitudes regarding doctors and medical care services. Medical Care, 13, 669-82.
- Ware, J. E., Wright, W. R., Snyder, M. K., & Chu, G. E. (1975). Consumer perceptions of health care services: Implications for academic medicine. Journal of Medical Education, 50, 839-48.
- Zyzanski, S. J., Hulka, B. S., & Cassel, J. C. (1974). Scale for the measurement of "satisfaction" with medical care: Modifications in content format and scoring. Medical Care, 12, 611-20.
- Report of the Military Health Care Study (December, 1975). Department of Defense, Department of Health, Education, and Welfare. Office of Management and Budget. (Report number 041-014000037-7). Washington, DC: U.S. Government Printing Office.
- DoD 1984 Health Care Survey (April, 1985). Why beneficiaries use the military health care system. Office of the Assistant Secretary of Defense for Health Affairs. Vector Research Inc.
- United States General Accounting Office (September, 1989). Defense Health Care: Patients' views on care they received. Government Accounting Office, Human Resources Division. (Report number GAO/HRD-89-137). Washington, DC
- RAND Corporation Health Care Reform Evaluation Study (ongoing).

APPENDIX A

PATIENT SATISFACTION SURVEY INSTRUMENT

SURVEY APPROVAL AUTHORITY: U.S. Army Soldier Support Center
 SURVEY CONTROL NUMBER: ATNC-AO-89-26
 RCS:MILPC-3

SATISFACTION WITH MEDICAL CARE

The United States Army Health Services Command is looking for ways to improve the military health care system. The purpose of this survey is to document how you feel about the medical care you receive at your current local military medical treatment facility. For each statement, circle one number or fill in a response. Please answer all questions. Your answers will be treated as confidential.

THINKING ABOUT YOUR OWN MEDICAL CARE, PLEASE INDICATE HOW MUCH YOU AGREE OR DISAGREE WITH EACH STATEMENT. (Circle one number for each.)

	<u>Strongly</u> <u>Agree</u>	<u>Agree</u>	<u>Not</u> <u>Sure</u>	<u>Disagree</u>	<u>Strongly</u> <u>Disagree</u>	
1. I am very satisfied with the medical care I receive.	1	2	3	4	5	(1)
2. There are some things about the medical care I receive that could be better.	1	2	3	4	5	(2)
3. All things considered, the medical care I receive is excellent.	1	2	3	4	5	(3)

THINKING ABOUT YOUR OWN MEDICAL CARE, HOW WOULD YOU RATE THE FOLLOWING? (If you have not received care recently, or have not used a particular service, circle #6: "Have Not Used.") (Circle one number for each.)

	<u>Poor</u>	<u>Fair</u>	<u>Good</u>	<u>Very</u> <u>Good</u>	<u>Excel-</u> <u>lent</u>	<u>Have</u> <u>Not</u> <u>Used</u>	
4. Convenience of the location of the office	1	2	3	4	5	6	(4)
5. Hours when office visits can be scheduled	1	2	3	4	5	6	(5)
6. Access to specialty care if you need it	1	2	3	4	5	6	(6)
7. Access to hospital care if you need it	1	2	3	4	5	6	(7)

	<u>Poor</u>	<u>Fair</u>	<u>Good</u>	<u>Very Good</u>	<u>Excel- lent</u>	<u>Have Not Used</u>	
8. Access to medical care in an emergency	1	2	3	4	5	6	(8)
9. Arrangements for making appointments for medical care by phone	1	2	3	4	5	6	(9)
10. Length of time it takes to make appointment by phone	1	2	3	4	5	6	(10)
11. Length of time you wait between making an appointment for routine care and the day of your visit	1	2	3	4	5	6	(11)
12. Length of time spent waiting at the office to see the doctor	1	2	3	4	5	6	(12)
13. Availability of medical information or advice by phone	1	2	3	4	5	6	(13)
14. Access to medical care whenever you need it	1	2	3	4	5	6	(14)
15. Services available for getting prescriptions filled	1	2	3	4	5	6	(15)

FINANCES

16. Protection you have against financial hardship due to medical expenses	1	2	3	4	5	6	(16)
17. Arrangements for you to get the medical care you need without financial problems	1	2	3	4	5	6	(17)

TECHNICAL QUALITY

18. Completeness and quality of medical offices & facilities	1	2	3	4	5	6	(18)
19. Thoroughness of examinations and accuracy of diagnoses	1	2	3	4	5	6	(19)
20. Skill, experience, and training of doctors	1	2	3	4	5	6	(20)
21. Thoroughness of treatment	1	2	3	4	5	6	(21)

	<u>Poor</u>	<u>Fair</u>	<u>Good</u>	<u>Very Good</u>	<u>Excel- lent</u>	<u>Have Not Used</u>	
COMMUNICATION							
22. Explanations of medical procedures and tests	1	2	3	4	5	6	(22)
23. Attention given to what you have to say	1	2	3	4	5	6	(23)
24. Advice you get about ways to avoid illness & stay healthy	1	2	3	4	5	6	(24)
CHOICE AND CONTINUITY							
25. Arrangements for choosing a personal doctor	1	2	3	4	5	6	(25)
26. Ease of seeing the doctor of your choice	1	2	3	4	5	6	(26)
INTERPERSONAL CARE							
27. Friendliness and courtesy shown to you by doctors	1	2	3	4	5	6	(27)
28. Personal interest in you and your medical problems	1	2	3	4	5	6	(28)
29. Respect shown to you, attention to your privacy	1	2	3	4	5	6	(29)
30. Reassurance and support offered to you by doctors and staff	1	2	3	4	5	6	(30)
31. Friendliness and courtesy shown to you by staff	1	2	3	4	5	6	(31)
32. Amount of time you have with doctors & staff during a visit	1	2	3	4	5	6	(32)
OUTCOMES							
33. The helpfulness of your medical care (how much you are helped)	1	2	3	4	5	6	(33)
34. Overall quality of care and services	1	2	3	4	5	6	(34)

THINKING ABOUT YOUR MEDICAL CARE, PLEASE INDICATE HOW MUCH YOUR AGREE OR DISAGREE WITH EACH STATEMENT. (Circle one number for each.)

	<u>Strongly</u> <u>Agree</u>	<u>Agree</u>	<u>Not</u> <u>Sure</u>	<u>Disagree</u>	<u>Strongly</u> <u>Disagree</u>	
35. There are things about the medical system I receive my care from that need to be improved.	1	2	3	4	5	(35)
36. The medical care I have been receiving is just about perfect.	1	2	3	4	5	(36)
37. I am dissatisfied with some things about the medical care I receive.	1	2	3	4	5	(37)

For the following statements, please circle one number or fill in a response.

38. Which one of the following basic health benefits or insurance plans best describes the type you use most?
- | | | |
|--|---|------|
| DoD Medical Treatment Facility (MTF) | 1 | |
| CHAMPUS | 2 | |
| MEDICARE | 3 | |
| Private health Insurance (Blue Cross, AARP, etc.) | 4 | |
| Combination of MTF and CHAMPUS | 5 | |
| Combination of MTF and CHAMPUS and private insurance | 6 | |
| Other combination | 7 | (38) |
39. Is your spouse covered by a private health insurance plan?
- | | | |
|----------------------------------|---|------|
| Does not apply, I am not married | 1 | |
| Yes | 2 | |
| No | 3 | (39) |
40. What type of private health insurance plan does your spouse currently have through his/her own job?
- | | | |
|---|---|------|
| Does not apply, I am not married | 1 | |
| Does not apply, my spouse is not currently working | 2 | |
| No coverage through current job | 3 | |
| Private health insurance that reimburses for/pays part or all | 4 | |
| Prepaid plan, such as an HMO | 5 | |
| Other kind | 6 | (40) |

41. Are your children covered by a private health insurance plan?

Does not apply, I have no children	1	
Yes	2	
No	3	(41)

42. How long have you used the DoD health system (such as an MTF)?

Does not apply, I have not used	1	
Less than 1 year	2	
1 - 2 years	3	
3 or more years	4	(42)

43. How long have you used the DoD health system (MTF) at this location?

Does not apply, I have not used	1	
Less than 1 year	2	
1 - 2 years	3	
3 or more years	4	(43)

44. Have you used the DoD health care system (MTF) in the last 12 months?

Yes	1	
No	2	(44)

45. During the last 12 months, how many admissions did you have for medical care? (when you stayed OVERNIGHT in an MTF)

Zero (no overnight stays)	1	
One	2	
Two to four	3	
Five to nine	4	
Ten or more	5	(45)

46. During the last 12 months, how many admissions did other members of your family have for medical care? (when they stayed OVERNIGHT in the local MTF)

Zero (no overnight stays)	1	
One	2	
Two to four	3	
Five to nine	4	
Ten or more	5	
Does not apply, I have no other family members	6	(46)

47. During the last 12 months, how many outpatient visits did you make for medical care? (DO NOT include medical visits when you stayed OVERNIGHT in the local MTF)

None	1	
1 visit	2	
2 - 4 visits	3	
5 - 9 visits	4	
10 or more visits	5	(47)

48. During the last 12 months, how many outpatient visits did other members of your family make for medical care? (DO NOT include medical visits when they stayed OVERNIGHT in the local MTF)

None	1	
1 visit	2	
2 - 4 visits	3	
5 - 9 visits	4	
10 or more visits	5	
Does not apply, I have no other family members	6	(48)

49. For the MTF at your current location, how long do you usually have to wait between the time you make an appointment for care and the day you actually see the provider?

Does not apply, I have not used	1	
2 days or less	2	
3 days to 1 week	3	
1 to 2 weeks	4	
3 to 4 weeks	5	
5 to 6 weeks	6	
7 to 8 weeks	7	
9 or more weeks	8	(49)

50. At the MTF at your current location, how long do you usually have to wait to see your provider when you have an appointment for care?

Less than 10 minutes	1	
10 - 15 minutes	2	
16 - 30 minutes	3	
31 - 45 minutes	4	
46 - 60 minutes	5	
More than 60 minutes	6	(50)

51. When you go for medical care how often do you see the same doctor?

Always	1	
Most of the time	2	
Sometimes	3	
Rarely or never	4	(51)

PERSONAL INFORMATION

52. What is your health status?

Excellent	1	
Very good	2	
Good	3	
Fair	4	
Poor	5	(52)

53. What is your age group as of your last birthday?

Less than 20 years	1	
21 - 30 years	2	
31 - 40 years	3	
41 - 50 years	4	
51 - 60 years	5	
More than 60 years	6	(53)

54. Are you male or female?

Male	1	
Female	2	(54)

55. What is your racial background?

White	1	
Black	2	
Asian or Pacific Islander	3	
American Indian, Aleut, Eskimo	4	(55)

56. Are you of Hispanic/Spanish origin or descent?

Yes	1	
No	2	(56)

57. What was the highest grade you completed in school? (Circle one number for the category that includes the highest grade you completed.)

Less than 8th grade	1	
Some high school	2	
High school graduate or GED	3	
Some college	4	
College graduate	5	
Post-graduate work or degree	6	(57)

58. Specify your sponsor's pay grade or rank. (Circle one number.)

PV1/E1	1	WO1	10	2LT/01	14
PV2/E2	2	CW2	11	1LT/02	15
PFC/E3	3	CW3	12	CPT/03	16
CPL, SPC/E4	4	CW4	13	MAJ/04	17
SGT/E5	5			LTC/05	18
SSG/E6	6			COL/06	19
SFC/FSG/E7	7			COL+	20
MSG/1SG/E8	8				
CSM/E9	9				

(58, 59)

59. Approximately what was your family's total income last year before taxes?

Less than \$10,000	1	
\$10,000 to \$19,999	2	
\$20,000 to \$29,999	3	
\$30,000 to \$39,999	4	
\$40,000 to \$49,999	5	
\$50,000 to \$59,999	6	
\$60,000 to \$69,999	7	
\$70,000 to \$79,999	8	
\$80,000 or more	9	(60)

60. Which of the following best describes your current marital status?

Single, never married	1	
Married	2	
Separated	3	
Divorced	4	
Widowed	5	(61)

61. What is the zip code at your home address?

Zip Code: _ _ _ _ _ (62-66)

62. Which category of beneficiary best describes you?

Active duty	1	
Active duty dependent	2	
Retired	3	
Retired/Deceased dependent	4	(67)

Additional comments:

Thank you for your cooperation!

CASE # _ _ _ (68-72)

(73,74)

APPENDIX B

PSYCHOMETRICS

The GHAA survey instrument consists of 36 rated items using a 5-point Likert scale. For the present study, one additional scale point was added to the GHAA 5-point scale, that of "Have Not Used." This scale point was treated as a missing value. One additional item (Q10) was added to bring the number of rated items to 37. GHAA recommends reverse scoring of three items (Q1, Q3, and Q36) so the content of the items would be worded in the same direction.

Factor Analysis

Responses from the 2874 respondents were submitted to a principal components factor analysis of the 37 rated items. Five factors with eigenvalues greater than 1.0 were obtained, accounting for 68.3% of the cumulative variance. A Varimax rotation with Kaiser normalization was performed on the factors. Items having an item-total of .45 and greater were extracted.

Reliability Estimates: Coefficient Alphas of GHAA Content Categories

The GHAA content categories were subjected to reliability estimates using the Kuder Richardson procedure to calculate coefficient alpha. Coefficient alphas for the separate GHAA scales consisting of more than one item are shown.

<u>Content Category Name</u>	<u>Number of</u> <u>Items</u>	<u>Items</u>	<u>Coefficient</u> <u>Alpha</u>	<u>Number of</u> <u>Cases</u>
Access	11	Q4-Q9, Q11-Q15	.895	1373
Choice/Continuity	2	Q25-Q26	.934	1856
Communication	3	Q22-Q24	.909	2352
Finances	2	Q16, Q17	.938	1827
Interpersonal Care	5	Q27-Q31	.944	2444
Technical Quality	4	Q18-Q21	.927	2448
#General Satisfaction	6	Q1-Q3, Q35-Q37	.885	2561

Note: # GHAA reverse scored

Reliability Estimates: Coefficient Alphas of Item Clusters From Factor Analysis

Reliability estimates were calculated for the item clusters extracted from the factor analysis. Coefficient alphas for the separate item clusters consisting of at least two items were:

<u>Item Cluster Name</u>	<u>Number of</u> <u>Items</u>	<u>Items</u>	<u>Coefficient</u> <u>Alpha</u>	<u>Number of</u> <u>Cases</u>
Interpersonal/Technical	17	Q18-Q24	.971	1665
Ease/Timeliness	7	Q9-Q13, Q25, Q26	.887	1463
Access	7	Q4-Q8, Q14, Q15	.863	1719
#General Satisfaction	6	Q1-Q3, Q35-Q37	.885	2561
Finances	2	Q16, Q17	.938	1827

Note: # GHAA reverse scored

Reliability Estimates: Inter-Item Correlations

Inter-item Pearson product moment correlation coefficients were calculated between selected items. The items selected were from the GHAA General Satisfaction content category. Correlation matrices for raw and for reverse-scored items follow.

Raw Score Items:					
	Q2	Q3	Q35	Q36	Q37
Q1	-404	834	-509	644	-554
Q2		-407	550	-415	496
Q3			-493	663	-550
Q35				-567	668
Q36					-614

GHAA Reverse-Scored Items:					
	Q2	Q3	Q35	Q36	Q37
#Q1	404	834	509	644	554
Q2		407	550	415	496
#Q3			493	663	550
Q35				567	668
#Q36					614

Note: # GHAA reverse scored

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Commander, Tripler Army Medical Center, TAMC, HI 96859-5000 (1)
Commander, Walter Reed Army Medical Center, Washington, DC 20307-5000 (1)

Commander, U.S. Army Medical Department Activity, Ft. Belvoir, VA. 22060-5000 (1)
Commander, U.S. Army Medical Department Activity, Ft. Benjamin Harrison, IN
46216-7000 (1)
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 (1)
 Commander, U.S. Army Medical Department Activity, Ft. George Meade, MD
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 Commander, U.S. Army Medical Department Activity, Ft. Monmouth, NJ
 07703-5504 (1)
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 Commander, U.S. Army Medical Department Activity, Ft. Stewart, GA
 31314-5300 (1)
 Commander, U.S. Army Medical Department Activity, Ft. Wainwright, AK
 99703-7300 (1)
 Commander, USA MEDDAC, West Point, NY 10996-1197 (1)

Deputy Under Secretary (Operations Research), Department of the Army ATTN:
 Mr. Walter Hollis, The Pentagon, Rm 2E660, Washington, DC 20310 (1)
 Army Study Program Management Office, ATTN: OASC-DMO Mrs. Joann Langston, The
 Pentagon Rm 3C567, Washington DC 20310 (1)
 HQDA (DAS6-CN), Room 623, Skyline Five, 5111 Leesburg Pike, Falls Church, VA
 22041-3258 (1)

Commander, U.S. Army Center of Military History, Pulaski Bldg, Massachusetts
 Ave., NW, Washington, DC 20314-0200 (1)
 Defense Advisory Committee on Women in the Services, ATTN: Maj Prewitt, Room
 3C769, The Pentagon, Washington, DC 20310 (1)
 Commander, U.S. Army Institute of Surgical Research, Brooke Army Medical Center
 Ft. Sam Houston, TX 78234-6200 (1)

Commandant, USA Academy of Health Sciences, Ft. Sam Houston, TX 78234 (1)
 Commandant, U.S. Army War College, Carlisle Barracks, PA 17013 (1)
 Commandant, U.S. Army Institute of Personnel and Resources Management, Ft.
 Benjamin Harrison, IN 46216 (1)
 Commandant, U.S. Army Chaplain Center and School, Ft. Monmouth, NJ 07703 (1)
 Commandant, U.S. Army Command and General Staff College, Ft. Leavenworth, KS
 66027 (1)
 Superintendent, US Military Academy, West Point, NY 10996 (1)